

Application Serial No. 10/624,466
Reply to Office Action dated September 3, 2004

REMARKS/ARGUMENTS

Initially, the Applicant would like to thank Examiner Paik for taking the time to discuss the present application with the Applicant's representative during a telephone interview conducted on December 2, 2004. Also, the Applicant would like to thank the Examiner for the early indication of allowable subject matter, holding that claims 5-7 and 13-15 are objected to but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. The remaining claims, i.e., claims 1-4, 8-10, 11, 12, 16 and 17-20, stand rejected under 35 U.S.C. § 103 based on Welle Jr. et al. Patent No. 4,786,799 in view of Ueda Patent No. 4,410,795.

The present invention is concerned with operating a cooktop having at least one heating element, at least one control element and a controller that is linked to the at least one heating element and the at least one control element to establish first and second setting schemes for the at least one heating element. More specifically, in the first setting scheme, the controller activates the at least one heating element based on a user selected power level. In contrast, when operating in the second setting scheme, the user establishes at least a selected power level, but the at least one heating element is initially operated at an initial power level that is higher than the selected power level for a predetermined time period. At the termination of the predetermined time period, the initial power level is automatically reduced to the selected power level. In accordance with a preferred form of the invention, the at least one control element is provided with even and odd numbers, with one of the even and odd numbers being associated with the first setting scheme and another of the even and the odd numbers being associated with the second setting scheme.

The Examiner relies upon Welle, Jr. et al. to teach a cooking appliance having a cooktop with a plurality of heating elements arranged thereon and a controller for establishing a desired heat power level for the heating elements. The Examiner correctly recognizes that Welle, Jr. et al. does not teach operating the heating elements in first and second setting schemes and thus combines Welle, Jr. et al. with Ueda to arrive at a

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cooking appliance that allows first and second setting schemes to be inputted. Actually, Ueda teaches controls for an oven, particularly a microwave oven capable of establishing different power level settings for different time periods in order to perform a cooking operation. However, in accordance with Ueda, the user must employ a complex series of steps to program an oven to operate at different power levels. That is, a consumer must separately input different power levels through the use of separate stage buttons each time the oven is used to establish different power level settings. Therefore, in addition to not being directed to a cooktop, Ueda does not teach operating in a first setting scheme where a heating element is operated at a selected power level and a second setting scheme where the heating element is operated at an initial power level for a predetermined period and thereafter automatically reduced to the selected power level upon the termination of the predetermined time period in a manner analogous to that of the present invention.

In discussing the present invention and the prior art during the interview, the Examiner agreed that activating the at least one heating element at an initial power level for a predetermined time period, without a user having to actually set the initial power level, is not taught in the prior art of record taken singly or in combination. Thus, it was agreed that incorporating language to more clearly point out that the initial power level in the second setting scheme does not have to be selected by a user would patentably define the present invention over the prior art. New independent claim 21 has been added to recite this feature. That is, in addition to including all the limitations of claim 1 as originally presented, new claim 21 includes the requirement that the controller activates the at least one heating element at an initial power level for a predetermined time period, "without a user having to set the initial power level." As this specific language was discussed with the Examiner and viewed favorably, it is submitted that claims 21 should be in clear condition for allowance.

As for claim 5, the Examiner indicated that placing claim 5 in independent form, while indicating that one of the even and odd numbers is associated with the first setting scheme and another of the even and odd numbers is associated with the second setting

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scheme, would still retain the features indicated to be allowable. Accordingly, by this amendment, claim 5 has been placed in independent form and amended as set forth above. The Applicant respectfully submits that the amendment to claim 5 does not introduce any new matter given that support for these changes can be found in the specification, such as on page 11, lines 2-8. Also, it should be noted that the amendment to claim 5 required a change to claim 7 purely for antecedent basis purposes.

Claim 11 is presented in a means-plus-function format such that this claim should be interpreted under 35 U.S.C. § 112 sixth paragraph and read in light of the specification. In accordance with one embodiment of the invention, the setting schemes are established through selection of a power level setting on a simple control element, such as a rotary knob or the like. The knob is positioned on, for example, an even numbered power level to establish the first setting scheme and on an odd numbered power level to establish the second setting scheme. When in the second setting scheme, after a power level is selected, a controller automatically sets an initial heat setting for a predetermined period of time. At the termination of the predetermined period of time, the controller automatically lowers the heat setting to, in the most preferred form of the invention, the selected power level. In accordance with another form of the invention, if so inclined, a user can set both selected and initial power levels. That is, after setting the selected power level, the consumer can set the initial power level by positioning the control element on a higher power level, and returning the control element to the selected power level (see the description on page 9 of the application). In this manner, the consumer is provided with added flexibility in operating the cooktop. In any case, in contrast to the Ueda reference which requires a complicated programming scheme to control heating levels in an oven, the present invention provides a simple, easy to operate means for operating a heating element on a cooktop. Clearly, none of the prior art, when taken singly or in combination, functions in the manner disclosed and claimed in this application. For example, note that the time period in accordance with the claimed invention is "predetermined" so it does not have to be entered by the user. This is certainly not the case in Ueda. Therefore, if given the appropriate interpretation, it is

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submitted that claim 11, as well as claims 12-16 dependent therefrom, should be readily allowed.

Claims 1 and 17 currently stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Welle Jr. et al. in view of Ueda. These rejections are respectfully traversed. The Applicant respectfully submits that the present invention presents a very unique arrangement for controlling heating levels for a heating element on a cooktop. As outlined above, in addition to providing a standard control scheme where a consumer simply selects a heat level, the present invention enables a consumer to select between setting schemes. In the second setting scheme, once the consumer selects a desired heat level, a controller activates the heating element at an initial level for a predetermined time period after which the output of the heating element is automatically reduced to the selected level. This arrangement provides the consumer with greater flexibility when preparing meals on a cooktop. Once a cooking operation is started, the consumer can perform other tasks without worrying about retuning to lower the temperature of the heating element.


The prior art presented by the Examiner fails to teach operating a cooktop in this manner. Actually, in an attempt to teach the particulars of the present invention, the Examiner relies upon a pair of references that have been around for quite some time. Certainly, cooktops are extremely old. The secondary reference to Ueda on the oven controls has been around for over ten years. The Applicant respectfully submits that there is no proper motivation to combine the references. As set forth above, the Welle Jr. et al. reference is directed to a cooktop having a plurality of heating elements arranged thereon and a controller for establishing a desired heat power level for the heating elements. The Ueda reference is directed to a heating apparatus with a programmable timer (see Abstract). Ueda refers to only a "heating apparatus with a programmable timer such as a microwave oven or an electric oven..." (see column 1, lines 11 and 12). There is simply no teaching to incorporate a console panel as set forth in Ueda into a cooktop. If combining this known prior art to arrive at the present invention was so obvious, one would assume that sometime during the course of the last ten years there would be some

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teaching to operate a cooktop in a manner corresponding to that set forth in the present application. This is simply not the case. In addition, with the combination suggested by the Examiner, it is assumed that a completely separately console panel constructed in accordance with Ueda would need to be incorporated into the cooktop of Welle Jr. et al. for each heating element. Obviously, such a modification would increase the standard dimensions of a cooktop to something dramatically larger. This is just not feasible. Simply stated, up until the present, programming or setting different, automatically initiated heat levels for a heating element has been strictly reserved for ovens. There is simply no prior art which is directed to operating a heating element of a cooktop in a corresponding manner. Without a teaching to this effect, it is submitted that the Applicant is entitled to this broader patent protection.

In view of the agreements reached during the interview conducted in this case, as well as the above remarks and amendments to the claims, it is respectfully submitted that the invention is patentably defined over the prior art of record such that allowance of all claims and passage of the application to issue are respectfully requested. If the Examiner should have any additional concerns regarding the allowance of this application, he is cordially invited to contact the undersigned at the number provided below if it would further expedite the prosecution of the application.

Respectfully submitted,


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